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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,925	10/03/2003	Takayuki Takeuchi	10873.1315US01	1175
23552	7590	08/10/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			THOMAS, ERIC W	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/678,925	Applicant(s) TAKEUCHI ET AL.	
	Examiner Eric W Thomas	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15, 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-14 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 6-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/03</u> . | 6) <input type="checkbox"/> Other: _____ |

AC

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

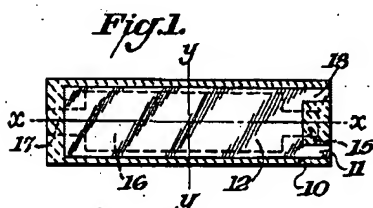
Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 10-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Coleman et al. (US 3,896,354).



Coleman et al. disclose a ceramic capacitor, comprising: a first conductive pattern (16); a second conductive pattern (12) and a dielectric layer (10), the first conductive pattern and the second conductive pattern being made of a conductor and provided so as to oppose each other and sandwich the dielectric layer therebetween, the first conductive pattern and the second conductive pattern being different in area

from each other, where the second conductive pattern is smaller than the first conductive pattern, and a portion where the first conductive pattern and the second conductive pattern overlap each other forming a capacitance portion, wherein a first extended portion (17) and a second extended portion made of the conductor are formed at both edges of the second conductive pattern so as to extend in mutually opposite directions.

Regarding claim 2, Coleman et al. disclose an outer edge of the second conductive pattern is formed so as not to extend beyond an outer edge of the first conductive pattern.

Regarding claim 3, Coleman et al. disclose the first extended portion and the second extended portion of the second conductive pattern extend outwardly beyond an outer edge of the first conductive pattern.

Regarding claim 4, Coleman et al. disclose a width of each of the first extended portion and the second extended portion of the second conductive pattern is narrower than a width of the first conductive pattern.

Regarding claim 5, Coleman et al. disclose neither of the first conductive pattern nor the second conductive pattern has an aperture.

Regarding claim 10, Coleman et al. disclose the first and second extended portion of the second conductive pattern have a same width.

Regarding claim 11, Coleman et al. disclose first and second extended portion of the second conductive pattern are present along a same line.

Regarding claim 12, Coleman et al. disclose the first extended portion and the second extended portion of the second conductive pattern are present in parallel lines.

Regarding claim 13, Coleman et al. disclose a method for producing a ceramic capacitor, comprising the steps of forming a first conductive pattern serving as one electrode of the capacitor on a first green sheet (see col. 3 lines 25-45); forming a second conductive pattern serving as the other electrode of the capacitor on a second green sheet (col. 3 lines 25-45); and laminating the first green sheet and the second green sheet, followed by sintering of the same, wherein in projection in a direction of the lamination, a main part of the second conductive pattern is formed smaller than the first conductive pattern so that an outer edge of the main part of the second conductive pattern does not extend beyond an outer edge of the first conductive pattern, and a first extended portion and a second extended portion are formed at both opposed edges of the second conductive pattern, the first extended portion and the second extended portion extending in mutually opposite directions and, in the projection in the lamination direction, each of the first extended portion and the second extended portion extending outwardly beyond the outer edge of the first conductive pattern.

Regarding claim 14, Coleman et al. disclose the first extended portion and the second extended portion are formed so as to have widths narrower than a width of the first conductive pattern.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman et al. (US 3,896,354) in view of Sunahara (US 6,153,290).

Coleman et al. disclose a capacitor comprising a first dielectric layer, and a first conductive pattern and a second conductive pattern made of a conductor provided so as to oppose each other and sandwich the first dielectric layer therebetween in a direction of a thickness of the first dielectric layer,

in projection in the thickness direction, the second conductive pattern is made smaller than the first conductive pattern so that an outer edge of the second conductive

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pattern does not extend beyond an outer edge of the first conductive pattern, a first extended portion and a second extended portion made of the conductor are provided at both opposed edges of the second conductive pattern so as to extend in mutually opposite directions, and in the projection in the thickness direction, each of the first extended portion and the second extended portion extends outwardly beyond the outer edge of the first conductive pattern.

Coleman et al. disclose the claimed invention except for the capacitor is formed in a dielectric multilayer device comprising a plurality of dielectric layers and a plurality of conductive patterns which are laminated alternately in a vertical direction having an interval therebetween.

Sunahara teaches that it is known in the art to form a capacitor within a dielectric multilayer device comprising a plurality of dielectric layers and a plurality of conductive patterns which are laminated alternately in a vertical direction having an interval therebetween.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the capacitor of Coleman et al. within the dielectric structure of Sunahara, since such a modification would provide the capacitor a system to operate in and would provide the Sunahara system with an improved multilayer capacitor that has a reduced (or elimination) variation in capacitance that are a result of misregistered electrodes.

Regarding claim 17, Coleman et al. disclose the first extended portion and the second extended portion are formed so as to have widths narrower than a width of the first conductive pattern.

Regarding claim 18, Coleman et al. disclose the first dielectric layer constituting the capacitor is formed with a thickness.

Sunahara teaches that it is known in the art that the dielectric layers the capacitor is formed thinner than any dielectric layers sandwiched between conductive patterns other than the first and the second conductive patterns.

Allowable Subject Matter

7. Claims 6-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 15, 19-20 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach or fairly suggest (taken in combination with the other claimed features) the first conductive pattern has an aperture (claims 6-9); a method of forming a capacitor wherein the first conductive pattern has an aperture (claim 15); and a dielectric device comprising a capacitor having an aperture formed in a first conductive pattern so as to penetrate in a same direction as the direction of the thickness of the first dielectric layer (claims 19-20).

Conclusion

In order to ensure full consideration of any amendments, affidavits, or declaration, or other documents as evidence of patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116 which will be strictly enforced.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric W Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on M,Tu,Sat 9 am - 9:30 pm; W, Th, F 6 pm -10:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'C72' followed by a long horizontal stroke, with the date '8/2/04' written below it.

Eric W Thomas
Examiner
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